Course: PHYS521 Quantum Mechanics I
Term: Fall 2019
Room: DCH 1075
Class: TR, 1:00-2:15pm

Instructor Contact Information

Instructor: Han Pu
Office: BRK 309
Email: hpu@rice.edu
Office Hours: by email appointment

Course Objectives and Learning Outcomes

In Phys521, we will cover the following topics: the basic postulates of Quantum Mechanics, matrix and wave mechanics, theory of spin and orbital angular momentum, time evolution, density operator, role of symmetry in quantum mechanics, approximate methods such as variational method and perturbation theory.

Topic Learning Outcomes: By the end of the course, students will be able to
(1) understand the basic postulates of quantum mechanics
(2) understand and manipulate the mathematical languages of quantum mechanics at a level expected of a graduate student
(3) solve typical problems similar to those encountered in homework

Required Texts and Materials

Modern Quantum Mechanics (2nd edition), Sakurai and Napolitano, Cambridge Univ. Press, 2017.

Exams and Papers

one midterm exam (some time in October), and one final exam.

Grade Policies

I plan to assign a homework set each week, usually due at the beginning of class one week later. Homework sets will be distributed in class but they will also be available from the course web page.

Homework Policy: Homework must be done under the Honor System. You are encouraged to discuss the homework problems with your PHYS 521 classmates and with the instructor, but you must write up your solutions *independently*. Of course, you must not copy from anyone else's solutions. The homework papers you hand in should be the result of your own thought and effort. Homework can be turned in during class or put in my mailbox located on the 2nd floor of Brockman Hall.

Late Policy: Late homework will be counted off 20% for each day late, unless excused by illness or some other valid reason. Late homework must be delivered to the instructor for that problem set and the student must write "Late" and the date and time on the front page.

Grading Weights:	Homework:	30%
	Midterm Exam:	30%
	Final Exam:	40%

Course Webpage: on Canvas

RICE HONOR CODE

In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

DISABILITY SUPPORT SERVICES

If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Support Services (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

SYLLABUS CHANGE POLICY

This syllabus is only a guide for the course and is subject to change with advanced notice.